Remarks/Arguments

Applicants respectfully request consideration of the subject application. This paper is submitted in response to the Office Action mailed May 1, 2008. Claims 21-42, 44-61, and 63-70 are rejected. In this Amendment, claims 21, 51, and 67 have been amended. No claims have been cancelled or added. Applicants reserve all rights with respect to the applicability of the Doctrine of Equivalents.

Claim Rejections under 35 U.S.C. §103(a)

The Examiner has rejected claims 21-42, 44, 46-49, 51-61, 63-65, and 67-70 under 35 U.S.C. § 103(a) as being unpatentable over Zintel (U.S. Patent No. 6,725,281) in view of alleged knowledge in the art (AKA). Applicants respectfully disagree.

Zintel describes a universal plug and play (UPNP) architecture where a user interface on board a client device may control host devices, such as VCRs, cameras, printers, etc. (Zintel, column 7, lines 44-52; column 48, lines 58-61). The client devices, or user control points, include a rehydrator that obtains a description of the protocols which are utilized by a controlled device to activate functions of the controlled device (Zintel, column 19, line 59 to column 20, line 51; Figure 7). When an event occurs at a device, software on that device updates a state table of the device and creates a notification indicating the update. This update is then propagated to the rest of the plug and play devices so that those devices may update their own state tables (Zintel, column 28, lines 64-67).

Claim 21, as amended, recites in part:

a module for generating at least one high-level event message indicating that an event has occurred that is relevant to the media capture device;

a router on-board the media capture device for determining whether said at least one high-level event message is handled locally at the media capture device or remotely at the second device, and for routing the at least one high-level event message within the on-board media capture device when the at least one high-level event message is determined to be handled locally at the media capture device;

a mapper on-board the media capture device for mapping said at least one high-level message into at least one lower-level message for controlling one or more hardware elements controlled by the second device, the at least one lower-level message includes implementation

specific information for the one or more hardware elements based on the second device and the event; …

Applicants respectfully submit that Zintel fails to teach each and every feature as claimed in claim 21.

Zintel describes that a controlled device may either respond directly to user control point requests, or broadcast device status for a controlled device. Furthermore, Zintel describes that all user control points include a rehydrator, which acts as an adaptor for translating messages received from a receiving controlled device, or which creates messages formatted so that a controlled device may understand it (Zintel, column 20, lines 31-65). The rehydrator is described and illustrated as existing within user control points (*See* Figures 7-10), and not controlled devices. Thus, any events, commands, or activities which are generated by, or the result of a response by, controlled devices, <u>are handled *at user control points* and not at the controlled devices</u>.

Applicants claim "a router <u>on-board</u> the media capture device for <u>determining whether said at least one high-level message is handled locally at the media capture device or remotely at the second device, and for routing the at least one high-level event message within the on-board media capture device when the at least one high-level event message is determined to be handled locally at the media capture device</u>."

The Event Subscription Server of Zintel is described as being responsible for sending updates to subscribing user control points in response to events. However, the status updates required in the UPNP architecture are automated so that subscribing devices are always provided with an updated status for controlled devices (*See* Zintel, column 17, lines 1-4 *stating* "UPNP rules *require every change* to an SST [for a controlled device] generate a corresponding event to announce the change to the all interest User Control Points"). Thus, when an event occurs at a controlled device, the controlled device <u>must</u> send update notifications to user control points remote to the controlled device because every event <u>requires</u> a notification be broadcast to all subscribing devices. Thus, even if such a broadcasted notification is considered message routing (Office Action, mailed October 19, 2007, page 11), there is no discretion of the controlled device to determine "whether said at least one lower-level message is handled locally at the media capture device or remotely at the second

device." Rather, the event <u>must</u> be broadcast to subscribing control points and handled remotely. Thus, Zintel specifically teaches away from "a router on-board the media capture device for determining whether said at least one high-level message is <u>handled locally</u> at the media capture device or remotely at the second device."

The Examiner states:

> Zintel does not explicitly indicate a module for generating at least one high-level event message indicating that an event has occurred that is relevant to the media capture device, which does not cause a change to the state table and a low level message to be sent. [¶] It would have been obvious to one of ordinary skill in the art at the time the invention was made that within the controlled device in Zintel, that there can be changes or "events" which do not cause changes to the state table, thus allowing the controlled device to handle those changes locally without reporting them to all the subscribing users.

(Office Action, mailed May 1, 2008, page 4)

Thus, the Examiner asserts that the AKA would result in certain events that do not cause changes to a state table and thus do not get reported to subscribing users. Even if Zintel were to include such events, as stated in the AKA, there is no indication that a "router on-board the media capture device" would be responsible for "determining whether said at least one high-level message is handled locally at the media capture device or remotely at the second device<u>, and for routing the at least one high-level event message within the on-board media capture device when the at least one high-level event message is determined to be handled locally at the media capture device</u>." Zintel fails to describe or suggest the claimed router or performing local message routing, and the AKA according to the Examiner merely notes that there may be events that do not change a state table. Thus, a combination of Zintel and AKA fail to teach or suggest "a router on-board the media capture device for determining whether said at least one high-level message, and for routing the at least one high-level event message within the on-board media capture device when the at least one high-level event message is determined to be handled locally at the media capture device." Furthermore, the Examiner cannot use the AKA to change fundamentally how the primary reference works. Since this change would require Zintel to be changed from

requiring that all messages be forwarded upstream, the references cannot be combined to reach such a result.

Applicants further claim in part "a mapper <u>on-board the media capture device</u> for mapping said at least one high-level message into at least one lower-level message for controlling one or more hardware elements controlled by the second device ..." Zintel describes the exact opposite of a mapper on board the media capture device (i.e., a controlled device), as Zintel requires that user control points utilize the Description Document and a rehydrator to perform message translation and handling <u>*at the user control point* and not the controlled device</u>.

Zintel further states:

> Accordingly, <u>the Rehydrator operates as a universal proxy object with data-driven conversion of programmatic interfaces to network data messages. Further, the Rehydrator produces the programmatic interface **at the User Control Point** based solely on an XML data description</u>. This operation allows the Rehydrator to produce just-in-time transient interfaces to remote device Services without the complexity of code downloads and installation or configuration. Upon a later release of the interface by the application, the Rehydrator destroys the interface without need to de-install or clean up persistent configuration data in a registry or configuration file of the operating system or object execution run-time

(Zintel, column 20, line 40 to 21, line 19 [Emphasis Added])

Thus, as recited in Zintel, the conversion of notifications that control and activate hardware elements at user control points is performed <u>at the user control point, and not at a controlled device</u>. Therefore, because Zintel provides for event handling and translation at a user control point, which is the opposite of translating or mapping commands <u>at a controlled device</u>, and thus fails to teach "a mapper <u>on-board the media capture device</u> for mapping said at least one high-level message into at least one lower-level message for controlling one or more hardware elements controlled by the second device ..." as claimed.

Therefore, Zintel in combination with the AKA fails to describe or suggest each and every feature as claimed by the Applicants in Claim 21. Applicants respectfully submit that claim 21 is not anticipated by Zintel, nor obvious over Zintel in view of AKA. Claims 22-42, 44, 46-49 depend on claim 21, and include additional features and

limitations to those contained in claim 21. Thus, for similar reasons to those discussed above with respect to claim 21, claims 22-42, 44, 46-49 are also not anticipated by Zintel, nor obvious over Zintel in view of the AKA. The Applicants respectfully request withdrawal of the rejections of claim 21-42, 44, 46-49 under § 103.

Claim 51, as amended, recites in part:

a router in the client device to determine whether the at least one high
level event message should be handled locally at the client device
or remotely at the host, and to route the at least one high level
event message within the client device when the at least one high
level event message is determined to be handled locally at the
client device;
a state transition table to transition the client device to the a new state
based on the at least one high level event and the client device's
present state;
a module to update the client device's current state information; and
a mapper on the client device for mapping said at least one high-level
message into at least one lower-level message for controlling one
or more hardware elements controlled by the host device, the
lower-level message includes implementation specific information
for the second device and the event, and for triggering the
activation of one or more user-perceivable interface elements of
the host device.

As discussed above, with respect to claim 21, Zintel is completely silent as to making any determination of mapping or message routing on board a media capture device, as well as message routing within the media capture device. Even if the system of Zintel were to make a routing determination, the determination is simply not performed "on board" a media capture device. Furthermore, the UPNP architecture of Zintel requires that hosts/user control points perform all notification and translation at a rehydrator. The AKA cannot be used to remedy this failure of Zintel, since it would require a fundamental change to the functioning of Zintel. Furthermore, the suggested AKA of the Examiner still does not teach or suggest routing on board a media capture device.

Because claim 51 claims "a mapper on the client device for mapping said at least one high-level message into at least one lower-level message" and "a router in the client device to determine whether the at least one high level event message should be handled locally at the client device or remotely at the host, and to route the at least one high level event message within the client device when the at least one high level event

message is determined to be handled locally at the client device," claim 51 is not anticipated by Zintel, or obvious over the combination of Zintel and AKA. Furthermore, claims 52-61 and 63-65, depend on claim 51, and include additional features and limitations. Thus, claims 52-61 and 63-65 are also not anticipated by Zintel, or obvious over Zintel in view of the AKA.

Claim 67, as amended, recites:

A method comprising:
determining one or more user interface elements of a media capture
    device that are supported by a second device and that can cause one
    or more user-perceivable interface elements of the second device to
    be activated, when the media capture device is coupled with the
    second device;
receiving a notification at the media capture device, indicating that an
    event has occurred with respect to the media capture device;
determining, at a router on-board the media capture device, whether the
    event should be handled locally at the media capture device or
    remotely at the second device;
when the event is to be handled locally, routing and processing the event
    locally at the media capture device;
transmitting a message to the second device, intended to activate a
    hardware element on the second device;
activating a hardware element and the one or more user-perceivable
    interface elements on the second device, in response to the message.

(Emphasis Added)

As discussed above, with respect to claim 21 and 51, Zintel fails to make any determination of message routing on board a media capture device or within a media capture device, and teaches the opposite as required by UPNP systems. The AKA does not remedy this shortcoming of Zintel.

Thus, Zintel in view of AKA fails to teach or suggest "determining, at a router on-board the media capture device, whether the event should be handled locally at the media capture device or remotely at the second device; when the event is to be handled locally, routing and processing the event locally at the media capture device," as claimed in claim 67. Therefore, Zintel in view of the AKA fails to make obvious claim 67. Claims 68-70 depend on claim 67, and include additional features and limitations. Thus, claims 68-70 are also not obvious over Zintel in view of the AKA.

Therefore, Applicant respectfully requests that the Examiner withdraw the rejection of claims 21-42, 44, 46-49, 51-61, 63-65, and 67-70 under 35 U.S.C. § 103(a) as being obvious over Zintel in view of AKA.

The Examiner rejects claims 50 and 66 under 35 U.S.C. § 103(a) as being unpatentable over Zintel in view of Armga (U.S. Patent No. 6,390,371). Applicants respectfully disagree.

As discussed above, with respect to independent claims 21 and 51, Zintel fails to describe or suggest making any mapping and routing decisions, on board a media capture device.

Armga describes a user interface generation scheme (Armga, Abstract). To ensure that a user interface is properly displayed, an intermediary obtains UI specifications and causes a display which is appropriate for the target device (Armga, column 3, line 36 to column 4, line 9). However, Armga's device-specific UI generation fails to describe or suggest mapping or routing messages on board a media capture device. Therefore, Zintel and Armga, alone or in combination, fail to render claims 21 and 51, and thus dependent claims 50 and 66, obvious.

Applicant respectfully requests that the Examiner withdraw the rejection of claims 50 and 66 under 35 U.S.C. § 103(a) as being unpatentable over Zintel in view of Armga.

The Examiner rejects claim 45 under 35 U.S.C. § 103(a) as being unpatentable over Zintel in view of Cortjens (U.S. Patent No. 5,526,037). Applicants respectfully disagree. Claim 45 depends on claim 21, and incorporates its limitations.

As discussed above, with respect to independent claim 21, Zintel fails to describe or suggest making any mapping or routing decisions on board a media capture device.

Cortjens describes generating control signals at local peripheral devices, such as a mouse or joystick (Cortjens, column 5, line 59 to column 6, line 2). The peripheral device is connected to a controller so that when the controller receives a signal/command from the peripheral device, the controller performs a signal conversion before sending the signal to a local or remote system (Cortjens, column 5, lines 55-59; column 8, lines 37-39). Thus, Cortjens describes a host or server device that performs signal routing, which is separate and distinct from the peripheral device that generates control signals. In Cortjens, the peripheral devices are a mouse, joystick, etc. and the

peripheral devices are not taught as performing any routing functions. Thus, Cortjens also fails to describe or suggest mapping and routing messages on board a media capture device, as recited in claim 21. Therefore, Zintel and Cortjens, alone or in combination, fail to render claim 21, and thus dependent claims 45, obvious.

Applicant respectfully requests that the Examiner withdraw the rejection of claim 45 under 35 U.S.C. § 103(a) as being unpatentable over Zintel in view of Cortjens.

Conclusion

Applicant respectfully submits that in view of the amendments and discussion set forth herein, the applicable rejections have been overcome. Accordingly, the present and amended claims should be found to be in condition for allowance.

If a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact Judith A. Szepesi at (408) 720-8300.

If there are any additional charges/credits, please charge/credit our deposit account no. 02-2666.

Respectfully submitted,

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